

## **REMARKS/ARGUMENTS**

Reconsideration of the present application is respectfully requested.

Claims 1 and 6 have been canceled, and claims 2-5 and 7-11 have been amended. Claim 12 has been added. The amendments are fully supported by the specification as detailed below. No new matter is added by way of this amendment. Hence, claims 2-5 and 7-12 will be pending and under consideration upon entry of this amendment.

The specification has been amended to correct obvious typographical errors. On page 4, lines 7-8 and on page 5, line 12, the numbers "3,00,000" and "5,00,000" have been corrected to recite "300,000" and "500,000," respectively. The number of zeroes within the numerical recitation of the specification clearly indicate that the ranges should be to three hundred thousand and five hundred thousand. No new matter is added by way of this amendment.

Claim 1 has been canceled and replaced by new independent claim 12. Claim 12 specifies the chemical substituents, ordered by formula numbers. New claim 12 is thus a regrouping of the information presented in original claim 1 as filed.

Additionally, Formulas 2 and 4 recited in claim 12 indicate the substituent "e" at an ortho position of the benzyl rings. Support for Formula 2 is found in the specification on page 1, line 13 and on page 3, line 12. Support for Formula 4 is found in Formulas 1-3. The substituent "e" in Formulas 1-3 are benzyl positions ortho to the imide group, whereas the substituent "c" in Formulas 1 and 2 are limited to the position para to the imide (*see* page 1, lines 13 and 18 and page 3, lines 12 and 17 of the specification). Therefore, by amending Formula 4, the one ortho position in all of the structures consistently reads "e". Formula 4 has also been amended and, thus, clarified in the specification. No new matter is added by way of these amendments.

### **I. Supplemental Information Disclosure Statement**

Applicants have reviewed the Examiner's comment regarding PTO/SB/08a/b dated 5/2005 and note that the "CB" reference of the Information Disclosure Statement filed October 20, 2004 was not considered by the Examiner. The Examiner indicated that a copy of the reference was not found within the file. Applicants resubmit herewith a copy of the reference (Seeger, Margarete, et al., "Magnesium Compounds", Ullmann's Encyclopedia of Industrial Chemistry, 'Online! 2002, paragraph 4.2.2.) in a Supplemental IDS as a courtesy. Additionally,

Applicants submit a copy of the return postcard from the USPTO (Tab A), reflecting the prior submission of the reference. Applicants request consideration of this reference by the Examiner.

## **II. Rejections Under 35 U.S.C. § 112, ¶ 2**

Claims 1-11 have been rejected under the second paragraph of 35 U.S.C. § 112 as being indefinite. In particular, the Examiner has rejected several terms and phrases as being unclear. These rejections are addressed in turn below.

The Examiner has rejected independent claim 1 for the phrases “such as carboxyl”, “a combination”, “CF<sub>3</sub>-C-CF<sub>3</sub>”, and “mixture” as indefinite. Also, the Examiner has rejected the term “alkyl” for lack of antecedent basis. Applicants have canceled claim 1 and have submitted new claim 12, which has replaced “such as carboxyl”, “a combination”, “CF<sub>3</sub>-C-CF<sub>3</sub>”, and “alkyl” with their complete representations. Additionally, step (a) of claim 12 has been amended to state “thus obtaining a mixture; and (b) extruding the mixture...” to clarify that the nucleation of step (a), which includes polyolefins and nucleating agents, produces the mixture later extruded in step (b). Support for these amendments is found in original claim 1 as filed.

The Examiner also has rejected claim 1 for redundant language. New claim 12, being grouped by formula number, eliminates any redundancy or conflict of substituent descriptions. Support for this amendment is found in original claim 1 as filed.

The Examiner has rejected claim 2 for lack of antecedent basis for the phrase “polyolefin polymer”. Applicants have deleted the term “polymer” in this phrase in amended claim 2 to properly express antecedent basis to new claim 12.

Additionally, the Examiner has rejected claim 2 for the term “5,00,000”. Applicants have amended claim 2 to recite “500,000”. Support for this amendment is discussed above.

The Examiner has rejected claims 3 and 4 as confusing for the recitation of “aliphatic mono-olefin”. This phrase has been canceled in both claims 3 and 4 to specify the polymer, which has aliphatic monomeric units.

The Examiner has rejected claim 5 for the phrases “is taken along” and “one or more ethylenically unsaturated comonomers.” Claim 5 has been amended to correct “taken along with” to properly state “nucleated in the presence of.” This amendment is supported by the specification as filed, which recites a nucleation process at page 3, lines 8-10 and page 5, lines 4-

7. Also, claim 5 has been clarified in that the aliphatic olefin species and the ethylenically unsaturated species are both comonomers.

Finally, the Examiner has rejected claim 7 for the phrase “the comonomer in copolymer...of olefin”. Claim 7 has been amended to state that the comonomer in co-polymer is the comonomer “of the” copolymer.

Based on the foregoing remarks, Applicants submit that each one of the rejections under 35 U.S.C. § 112, second paragraph, has now been obviated. Applicants therefore respectfully request that these rejections be withdrawn.

### **III. Rejections Under 35 U.S.C. § 102 and 35 U.S.C. § 103 Pertaining to DE 1935239**

Claims 1 and 8-11 have been rejected under 35 U.S.C. § 102(b) as anticipated by, or alternatively under 35 U.S.C. § 103(a) as obvious over, the German patent document DE 1935239 (hereinafter “DE ‘239”). Specifically, the Examiner states that DE ‘239 discloses “the presently claimed imide component” (*see*, Office Action at page 4, line 6). A copy of a certified English translation of DE ‘239 is provided at Tab B. Applicants traverse the rejection and respectfully request reconsideration.

Anticipation requires that each and every element of the rejected claim(s) be disclosed in a single prior art reference. *See* MPEP § 2131 (8th Ed., Rev. 2, May 2004). “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicants respectfully submit that DE ‘239 does not disclose the imide nucleating agents of the present invention. DE ‘239 describes reaction products of substituted di- and tetracarboxylic acids (DE ‘239 at page 4, first paragraph). The nucleating agents of the present invention as claimed in new claim 12 include Formulas 1 and 3 that are N-substituted benzylcarboxylic acid derivatives where the carboxylic acid group is at least para to the imide group. Nowhere within DE ‘239 do the resulting nucleating agents have a carboxylic acid group para to the imide. Formulas 2 and 4 of the presently claimed invention are also distinguishable from the compounds of DE ‘239 in that the N-substituted aromatic ring(s) is(are) a heterocycle. In fact, no compound mentioned in DE ‘239 has a heterocycle or is parasubstituted with a carboxylic acid functional group (*see* page 4, and Tables I, II and IV in DE ‘239). Therefore, DE

'239 fails to teach each and every element of the nucleating agents of the present invention. Applicants therefore respectfully request that the 102(b) prior art rejection over DE '239 be withdrawn.

DE '239 also does not render the claims of the present invention obvious. A *prima facie* case for obviousness under 35 U.S.C. § 103(a) can only be established by showing all of the elements of the invention are disclosed, that there was a concrete suggestion or motivation to modify or combine the teachings of the prior art, coupled with a reasonable expectation of success (M.P.E.P. § 2142). The motivation and the reasonable expectation of success must be found in the prior art and not in the Applicants' disclosure. See M.P.E.P. § 2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

DE '239 does not disclose all of the elements of the nucleating agents as described above and does not suggest altering the compounds disclosed therein to encompass those of the present invention. Nowhere does DE '239 suggest modifying the compounds in DE '239 to parasubstituted carboxylic acid imide derivatives or derivatives with N-substituted heterocycles. Therefore, the nucleating agents of the present invention are not obvious over DE '239. Applicants respectfully request withdrawal of the 103(a) rejection over DE '239.

#### **IV. Rejections Under 35 U.S.C. § 103**

##### **A. *Rejection of Claims 2-7 as Obvious over DE 1935239 in view of U.S. Patent No. 6,096,811***

Claims 2-7 have been rejected under 35 U.S.C. § 103(a) as being obvious over DE '239 in view of U.S. Patent No. 6,096,811 (hereinafter "Amos"). The Examiner states that it would have been obvious for one of ordinary skill in the art to use the olefins or polyolefins of DE '239 with the nucleating agents of Amos (pages 4 and 5 of Office Action). Applicants traverse the rejection and respectfully request reconsideration.

Applicants respectfully submit that DE '239 does not disclose the present invention as recited in new claim 12, as explained above. Applicants submit that Amos does not compensate for the deficiencies of DE '239. The nucleating agents of the present invention are distinguishable from those of DE '239 and Amos. Amos' teaching is limited to bridged bicyclic nucleating agents (see, for example, Amos at the abstract and at column 3, starting at line 3). DE

'239 does not suggest modifying the nucleating agents, as discussed above. Nowhere are the specific nucleating agents of new claim 12 disclosed in Amos, and nowhere within Amos is it suggested to modify the bridged nucleating agents to even non-bridged agents. Therefore, a *prima facie* case for obviousness is not satisfied. Withdrawal of this rejection is respectfully requested.

**B. Rejection of Claims 1-11 as Obvious over U.S. Patent No. 5,494,948 in view of U.S. Patent No. 6,096,811**

Claims 1-11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,494,948 (hereinafter "Nishio") in view of Amos. Specifically, the Examiner has stated that "the exemplified m-phenylenebismaleimide meets the presently claimed formula 1 as defined when A is a double bond and c is an imide functional group" (page 5, Office Action). Applicants traverse the rejection and respectfully request reconsideration.

Applicants submit that nowhere within Nishio or Amos are the nucleating agents of the present invention disclosed. Nishio's teachings are limited to bismaleimide compounds (see, for example, Nishio at column 2, lines 53-60). New claim 12 teaches that the substituent "c" is a carboxylic acid functional group. Therefore, "c" cannot be an imide functional group, and Formulas 1-4 of new claim 12 cannot be the bismaleimide compounds of Nishio. Because Nishio gives no suggestion of any other type of imide compound except for these bismaleimide compounds, the bismaleimide nucleating agents of Nishio do not disclose any variant of Formulas 1-4.

Amos does not disclose any imide nucleating agents as those claimed in the present invention. Therefore, there is no motivation to combine the teachings of Amos with Nishio's bismaleimide compounds. Accordingly, Nishio in view of Amos cannot be obvious over claim 12 or dependent claims 2-5 and 7-11. Applicants respectfully request that this rejection be withdrawn.

V. **Conclusion**

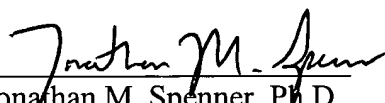
Applicants respectfully submit that the amendments and remarks presented here overcome and/or obviate each basis for objection and rejection set forth in the Office Action. The specification and pending claims, as amended, are all believed to be in immediate condition for allowance. Accordingly, the withdrawal of all objections and rejections is respectfully requested. An allowance is earnestly sought.

It is believed that no additional fees are required for these submissions. However, should it be found that any additional fee is required or that a refund owed for this application, the Director is hereby authorized and requested to credit any overpayments and/or charge any additional fees during the pendency of this application to our Deposit Account No. 04-0100.

Respectfully submitted,

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**Title:** PREPARATION OF SEMI-CRYSTALLINE  
THERMOPLASTIC POLYMERS

**Documents:**

Information Disclosure Statement (4 pages)

PTO SB/P8 (1 page)

3 Documents

Copy of International Search Report

Certificate of Express Mail

**Via:** Express Mail: Airbill No.

*EV367698896-US*

**Sender Initials:** ACG/ekc **Date:** October 20, 2004

*LDBP*